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North Central
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Research Note **NC-368**
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Pulpwood Production in the Lake States, 1994

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ABSTRACT.—Pulpwood production in the Lake States increased from 9.4 million cords in 1993 to 9.7 million in 1994. Michigan, Minnesota, and Wisconsin pulpwood production is shown by county and species group.

KEY WORDS: Residue, roundwood, whole tree chips, Minnesota, Michigan, Wisconsin.

Pulpwood production[2] in the Lake States—Michigan, Minnesota, and Wisconsin—increased to 9.7 million cords in 1994 from 9.4 million cords in 1993[3]. Wisconsin produced 3.5 million cords, Michigan produced 3.3 million cords, and Minnesota produced 3.0 million cords in 1994 (table 1). Ninety-two percent of the pulpwood produced came from roundwood (including chips from roundwood); the remainder came from mill residues such as slabs, edgings, veneer cores, and chips from these materials (fig. 1).

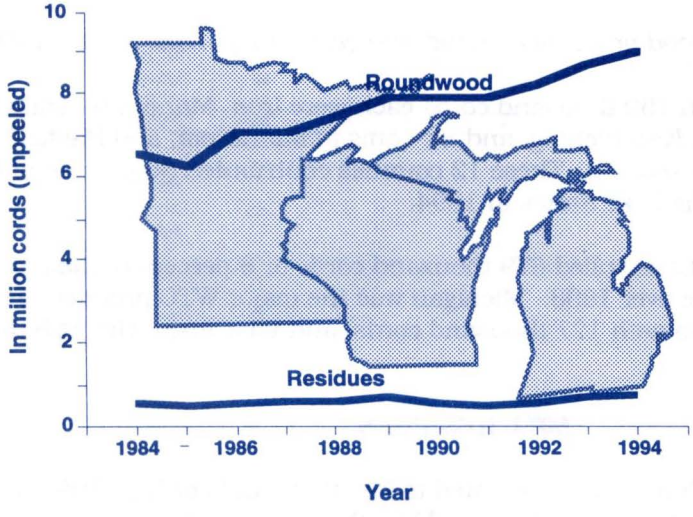

Figure 1.—*Pulpwood production, Lake States, 1984-1994.*

ROUNDWOOD

Roundwood production totaled 9.0 million cords and was equally distributed among the three Lake States. Seventy-eight percent of the harvested species were hardwoods. Aspen accounted for 49 percent of the total production (4.4 million cords). The other major species groups were maple (1.3 million cords), pine (1.2 million cords), spruce-fir (0.6 million cords), and birch (0.6 million cords) (fig. 2).

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[2] *Includes logs, bolts, and wood residue used in manufacturing particleboard, wafer board, oriented strand board, hardboard, and medium density fiberboard.*

[3] *Previous year's data are from "Pulpwood Production in the Lake States, 1993," Research Note NC-367, 1995.*

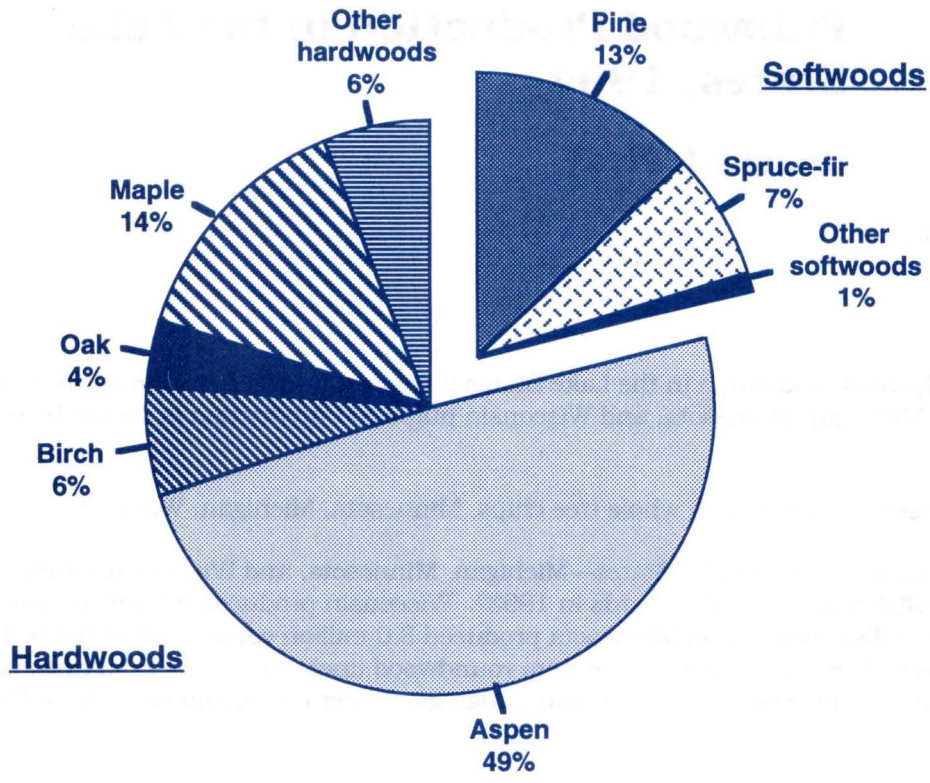

Figure 2.—*Distribution of roundwood production by major species group, Lake States, 1994.*

Counties harvesting more than 150 thousand cords each were Iron, Marquette, and Ontonagon in Michigan; Beltrami, Cass, Itasca, Koochiching, and St. Louis in Minnesota; and Bayfield, Douglas, Iron, Marinette, and Oneida in Wisconsin. These 12 counties contributed 36 percent of the pulpwood production from roundwood in the Lake States in 1994.

In 1994, whole tree chips (WTC) supplied 679 thousand cords or 8 percent of the roundwood production, a 13-percent increase over 1993. Michigan was the major WTC producer with 448 thousand cords, followed by Minnesota with 127 thousand cords, and Wisconsin with 105 thousand cords.

MILL RESIDUES

Pulpwood production from mill residues amounted to 756 thousand cords in 1994, a 10-percent increase over 1993. Mill residue production increased by 53 percent in Minnesota, increased by only 4 percent in Wisconsin, and decreased by 2 percent in Michigan. Production from softwood and hardwood residues by State was:

State	Softwood	Hardwood
	(Thousand standard cords, unpeeled equivalents)	
Michigan	72	169
Minnesota	103	69
Wisconsin	68	276

Table 1. -- Lake States pulpwood production from roundwood by county and species group, 1994

(In standard cords, unpeeled)

MINNESOTA

Unit and county[1]	All species	Species group										
		Pine	Spruce	Balsam fir	Hemlock	Tamarack	N. white-cedar	Aspen	Birch	Oak	Maple	Other hardwoods
Aspen-Birch												
Carlton	46,867	3,131	2,406	9,761	-	36	-	21,266	7,936	5	257	2,068
Cook	39,239	4,465	8,765	5,974	-	52	-	43,696	1,654	1	31	1,417
Koochiching	475,842	9,805	61,213	32,668	-	1,258	-	320,963	1,471	4	328	48,132
Lake	107,256	7,412	17,448	11,997	-	323	-	44,468	15,098	2	1,363	9,144
St Louis	622,290	21,124	46,680	53,423	-	701	-	431,286	18,138	5	8,228	42,704
Total	1,318,309	45,937	136,512	113,823	-	2,370	-	861,679	44,299	18	10,207	103,465
Northern Pine												
Aitkin	101,776	2,020	435	5,055	-	-	-	87,089	355	3	3,948	2,871
Becker	91,561	1,263	-	682	-	-	-	89,225	256	-	-	135
Beltrami	204,648	8,284	5,619	4,521	-	567	-	171,387	7,990	-	149	6,132
Cass	168,005	11,604	1,665	6,364	-	-	-	142,276	3,891	28	806	1,372
Clearwater	68,195	258	266	2,048	-	-	-	63,375	1,144	-	-	1,104
Crow Wing	76,745	7,425	15	-	-	-	-	67,486	1,820	-	-	-
Hubbard	115,055	4,301	228	436	-	-	-	104,387	3,454	-	-	2,249
Itasca	344,093	5,279	17,679	48,807	-	-	-	248,425	10,895	8	5,264	7,735
Lake of the Woods	50,754	9,398	1,723	1,838	-	-	-	36,895	-	-	-	901
Mahnomen	17,242	-	-	-	-	-	-	17,242	-	-	-	-
Roseau	27,178	7,769	220	110	-	-	-	18,285	-	-	-	794
Wadena	17,518	2,404	-	-	-	-	-	15,053	16	1	40	4
Total	1,282,770	60,005	27,848	69,862	-	567	-	1,061,123	29,821	41	10,207	23,297
Central Hardwood												
Anoka	74	74	-	-	-	-	-	-	-	-	-	-
Benton	744	-	-	-	-	-	-	744	-	-	-	-
Carver	309	-	-	-	-	-	-	309	-	-	-	-
Chisago	1,637	1,615	-	-	-	-	-	22	-	-	-	-
Douglas	10	10	-	-	-	-	-	-	-	-	-	-
Isanti	1,975	1,438	14	23	-	-	-	501	-	-	-	-
Kanabec	22,156	186	-	9	-	-	-	21,561	59	-	240	100
Mille Lacs	49,888	252	-	-	-	-	-	49,114	-	-	522	-
Morrison	12,397	471	-	-	-	-	-	11,926	-	-	-	-
Otter Tail	26,918	94	-	-	-	-	-	26,620	-	-	-	204
Pine	101,177	8,239	533	1,366	-	-	-	83,574	959	296	5,302	908
Sherburne	1,099	1,034	66	-	-	-	-	-	-	-	-	-
Todd	3,261	234	-	-	-	-	-	3,026	-	-	-	-
Wabasha	526	526	-	-	-	-	-	-	-	-	-	-
Total	222,171	14,174	613	1,398	-	-	-	197,396	1,018	296	6,065	1,212
Prairie												
Clay	60	-	-	-	-	-	-	60	-	-	-	-
Kittson	129	-	-	-	-	-	-	129	-	-	-	-
Marshall	9,317	-	-	-	-	-	-	9,317	-	-	-	-
Norman	5,668	-	-	-	-	-	-	5,668	-	-	-	-
Pennington	3,701	-	-	-	-	-	-	3,701	-	-	-	-
Polk	10,365	-	-	-	-	-	-	10,365	-	-	-	-
Red Lake	5,829	-	-	-	-	-	-	5,829	-	-	-	-
Total	35,069	-	-	-	-	-	-	35,069	-	-	-	-
State total	2,858,319	120,115	164,973	185,084	-	2,937	-	2,155,268	75,137	354	26,478	127,974

[1] Includes only those counties that supplied pulpwood in 1994.

(Table 1 continued on next page)

(Table 1 continued)

MICHIGAN

Unit and county[1]	All species	Species group										
		Pine	Spruce	Balsam fir	Hemlock	Tamarack	N. white-cedar	Aspen	Birch	Oak	Maple	Other hardwoods
Eastern Upper Peninsula												
Alger	137,519	15,897	1,629	6,612	6,486	626	661	23,672	8,927	1,362	58,885	12,764
Chippewa	107,527	26,199	4,109	10,395	4,695	847	982	24,003	5,327	241	20,980	9,745
Delta	146,953	19,250	3,439	8,499	4,761	752	790	45,189	23,461	776	27,873	12,163
Luce	72,399	11,937	3,284	5,622	5,744	496	553	10,275	4,082	763	25,959	3,685
Mackinac	94,285	7,266	4,127	5,669	2,245	393	508	30,202	11,308	266	22,137	10,166
Menominee	98,682	5,088	2,579	7,578	1,502	308	277	32,528	14,664	893	25,415	7,851
Schoolcraft	115,657	25,038	3,556	10,742	8,213	1,043	1,097	15,429	6,925	742	33,673	9,200
Total	773,022	110,675	22,722	55,117	33,647	4,466	4,868	181,296	74,693	5,045	214,922	65,572
Western Upper Peninsula												
Baraga	91,385	4,151	953	2,073	1,442	215	170	31,138	9,303	1,126	32,039	8,775
Dickinson	113,903	15,356	4,779	4,647	2,290	501	405	55,312	8,279	570	16,320	5,443
Gogebic	84,784	854	3,965	3,252	906	-	-	20,255	3,768	2,930	41,385	7,468
Houghton	127,812	6,962	2,410	3,655	1,654	168	187	27,962	14,690	2,366	54,430	13,329
Iron	183,759	15,994	11,142	12,355	3,633	578	564	61,070	11,636	2,290	49,040	15,457
Keweenaw	19,322	111	198	-	27	-	-	5,090	1,524	421	10,234	1,717
Marquette	326,296	45,809	12,581	17,435	23,962	1,687	1,646	76,699	29,913	2,004	89,352	25,207
Ontonagon	193,067	11,473	2,275	1,858	516	10	4	82,364	8,352	3,710	57,928	24,576
Total	1,140,329	100,708	38,304	45,276	34,432	3,158	2,975	359,890	87,466	15,416	350,730	101,973
Northern Lower Peninsula												
Alcona	52,371	835	16	26	-	-	-	33,748	2,388	7,589	4,239	3,529
Alpena	19,022	621	84	270	-	-	18	11,900	1,083	478	3,210	1,357
Antrim	8,444	451	-	-	-	-	-	3,729	332	150	3,403	378
Arenac	14,831	203	-	-	-	-	-	11,146	944	370	1,912	256
Bay	329	-	-	-	-	-	-	329	-	-	-	-
Benzie	19,566	53	-	-	-	-	-	6,621	1,544	764	6,877	3,707
Charlevoix	17,593	811	30	127	-	-	16	12,501	434	-	3,443	231
Cheboygan	58,121	12,726	270	864	-	-	96	30,825	2,686	1,285	7,677	1,690
Clare	59,207	667	-	-	-	-	-	46,011	2,192	1,591	8,530	218
Crawford	53,372	27,310	51	213	-	-	27	14,406	1,123	5,853	3,742	646
Emmet	22,668	3,250	53	119	-	-	6	11,797	1,194	2	5,761	486
Gladwin	20,825	362	-	-	-	-	-	15,531	1,036	764	2,960	173
Grand Traverse	18,081	8,426	-	-	-	-	-	3,194	364	301	4,352	1,443
Iosco	14,077	621	-	-	-	-	-	7,429	1,519	1,766	2,373	370
Isabella	17,163	65	-	-	-	-	-	10,315	1,084	3,705	1,153	840
Kalkaska	38,427	15,118	-	-	-	-	-	12,209	1,048	1,068	8,300	682
Lake	43,403	5,409	-	-	-	-	-	17,022	1,097	16,880	2,315	681
Leelanau	6,862	1,677	-	-	-	-	-	1,095	424	335	2,371	958
Manistee	47,467	806	-	-	-	-	-	18,158	2,043	11,705	11,724	3,031
Mason	26,870	-	-	-	-	-	-	15,005	1,424	5,998	3,644	799
Mecosta	34,026	13	-	-	-	-	-	21,305	1,089	5,383	4,180	2,057
Midland	18,266	35	-	-	-	-	-	10,415	1,708	1,197	3,574	1,338
Missaukee	44,404	3,671	-	-	-	-	-	23,920	2,178	3,725	7,691	3,221
Montmorency	54,474	3,450	-	30	-	-	-	29,135	2,879	4,015	9,274	5,690
Newaygo	30,397	-	-	-	-	-	-	16,125	485	8,131	4,343	1,312
Oceana	21,387	-	-	-	-	-	-	11,601	663	4,417	2,518	2,188
Ogemaw	30,809	4,805	2	7	-	-	1	17,223	1,873	2,208	3,942	749
Osceola	29,543	67	-	-	-	-	-	16,119	1,549	6,740	3,570	1,499
Oscoda	28,172	5,471	-	10	-	-	-	14,949	1,215	3,018	2,920	591
Otsego	37,641	5,110	208	400	-	-	15	20,499	1,018	168	9,304	921
Presque Isle	71,565	3,790	341	311	-	-	2	35,560	8,961	5,310	10,654	6,635
Roscommon	52,186	23,300	-	-	-	-	-	19,661	1,222	2,945	4,904	154
Wexford	23,143	3,116	-	-	-	-	-	7,521	785	1,160	7,730	2,831
Total	1,034,709	132,235	1,055	2,377	-	-	180	527,004	49,583	109,020	162,593	50,662
Southern Lower Peninsula												
Allegan	10,104	-	-	-	-	-	-	1,814	-	7,229	1,062	-
Barry	742	-	-	-	-	-	-	-	-	537	204	-
Calhoun	2,007	-	-	-	-	-	-	-	-	2,006	-	-
Cass	471	-	-	-	-	-	-	-	-	430	41	-
Clinton	597	-	-	-	-	-	-	-	-	335	-	261
Eaton	3,617	-	-	-	-	-	-	-	52	1,325	1,042	1,197
Gratiot	147	9	-	-	-	-	-	138	-	-	-	-
Jackson	13	-	-	-	13	-	-	-	-	-	-	-
Kalamazoo	2,329	-	-	-	-	-	-	-	-	2,329	-	-
Kent	9,233	-	-	-	-	-	-	3,672	3	3,851	1,697	9
Montcalm	14,311	17	-	-	-	-	-	4,278	575	7,100	1,352	990
Muskegon	14,165	-	-	-	-	-	-	5,710	223	6,607	1,163	460
Ottawa	3,183	-	-	-	-	-	-	274	-	2,419	490	-
Saginaw	18	-	-	-	-	-	-	-	-	-	18	-
Shiawassee	331	-	-	-	-	-	-	229	-	102	-	-
St Joseph	2,527	-	-	-	-	-	-	-	-	1,792	735	-
Van Buren	962	-	-	-	-	-	-	-	-	716	245	-
Total	64,755	26	-	-	13	-	-	16,116	853	36,780	8,049	2,919
State total	3,012,815	343,646	62,081	102,769	68,091	7,624	8,023	1,084,306	212,595	166,261	736,294	221,126

(Table 1 continued on next page)

(Table 1 continued)

WISCONSIN

Unit and county[1]	All species	Species group										
		Pine	Spruce	Balsam fir	Hemlock	Tamarack	N. white-cedar	Aspen	Birch	Oak	Maple	Other hardwoods
Northeastern												
Florence	72,346	4,163	1,267	2,037	3,238	122	22	33,336	5,600	939	17,589	4,032
Forest	139,745	5,357	3,297	5,688	2,412	63	-	41,868	13,907	5,318	47,432	14,404
Langlade	132,316	6,756	1,451	4,279	1,390	146	-	50,088	15,478	4,809	37,486	10,433
Lincoln	107,730	5,791	827	2,892	577	605	-	48,495	10,108	6,763	20,096	11,576
Marinette	133,085	44,648	522	5,129	365	442	6	48,244	8,569	2,402	18,473	4,284
Menominee	75,643	6,843	327	1,535	17,504	133	147	22,456	2,949	1,931	16,124	5,692
Oconto	71,164	18,225	13	833	159	9	-	26,553	8,486	949	12,665	3,271
Oneida	161,853	19,164	2,772	5,246	1,551	1,260	-	49,455	23,976	11,055	28,864	18,508
Shawano	25,572	2,695	35	36	340	203	-	17,217	498	467	2,818	1,262
Vilas	146,871	21,549	1,832	3,819	600	272	-	55,638	26,403	4,805	24,138	7,812
Total	1,066,324	135,191	12,344	31,494	28,136	3,256	176	393,353	115,974	39,439	225,685	81,278
Northwestern												
Ashland	82,438	4,302	4,182	3,186	299	786	-	34,599	7,485	4,029	19,330	4,239
Barron	22,691	2,643	120	14	11	860	-	9,428	2,020	1,277	4,837	1,482
Bayfield	196,751	57,453	949	1,308	33	56	-	84,367	22,878	5,593	19,142	4,973
Burnett	78,630	45,422	93	180	14	13	-	23,694	1,907	1,565	4,057	1,687
Douglas	177,846	71,513	2,421	10,356	-	133	-	67,165	15,322	1,454	6,866	2,616
Iron	151,210	2,905	2,980	4,158	895	76	-	77,873	11,419	6,973	32,645	11,288
Polk	27,230	6,388	88	13	-	-	-	16,399	1,287	562	1,761	730
Price	142,693	5,684	2,234	6,488	843	1,251	-	66,709	16,585	5,895	25,943	11,060
Rusk	111,785	2,689	747	408	305	646	-	53,066	11,329	5,872	27,473	9,249
Sawyer	139,451	12,653	968	2,371	178	683	-	53,241	22,811	5,128	33,629	7,790
Taylor	77,695	598	785	2,214	1,120	361	-	42,865	5,797	3,158	13,927	6,870
Washburn	103,142	29,676	208	700	19	6	-	43,623	7,654	2,379	15,067	3,809
Total	1,311,562	241,926	15,775	31,395	3,717	4,873	-	573,027	126,492	43,883	204,678	65,795
Central												
Adams	78,054	58,063	71	-	-	-	-	2,414	300	15,911	602	494
Chippewa	37,390	1,384	32	70	90	146	-	22,139	2,524	2,046	6,289	2,671
Clark	84,182	7,308	10	14	9	-	-	37,764	5,541	9,902	19,082	4,552
Eau Claire	53,382	20,418	219	2	-	-	-	14,728	2,618	7,676	6,249	1,474
Jackson	99,933	66,649	83	-	10	8	-	17,655	1,706	7,086	5,440	1,296
Juneau	54,550	37,970	-	5	-	-	-	2,569	508	11,528	1,587	383
Marathon	62,527	6,770	711	121	892	74	-	32,121	1,987	1,691	10,719	7,442
Marquette	12,909	11,233	24	-	-	-	-	261	107	838	365	79
Monroe	26,769	20,049	10	-	-	-	-	1,620	247	3,551	1,068	222
Portage	34,738	19,910	52	9	165	183	-	8,268	555	1,874	2,389	1,333
Waupaca	20,968	11,727	90	15	9	-	-	6,196	222	393	1,409	908
Waushara	31,791	26,205	86	-	-	8	-	1,374	215	2,907	712	283
Wood	43,046	19,371	43	5	42	-	-	15,403	1,171	1,770	4,153	1,088
Total	640,239	307,056	1,433	241	1,217	419	-	162,513	17,703	67,170	60,262	22,225
Southwestern												
Buffalo	6,303	1,393	-	-	-	-	-	4,722	34	16	112	26
Crawford	393	221	-	-	-	-	-	16	1	141	7	7
Dunn	15,986	4,766	115	-	-	-	-	5,673	944	887	2,620	980
Grant	3,872	3,638	-	-	-	-	-	-	10	79	122	24
Iowa	1,190	1,182	9	-	-	-	-	-	-	-	-	-
La Crosse	6,367	5,739	15	-	-	-	-	-	15	316	218	64
Lafayette	14	-	14	-	-	-	-	-	-	-	-	-
Pepin	1,641	998	71	-	-	-	-	514	8	5	35	9
Pierce	1,294	686	70	10	-	-	-	516	2	1	7	1
Richland	1,703	1,553	89	-	-	-	-	14	3	17	22	4
Sauk	8,381	6,495	17	-	-	-	-	262	49	1,336	158	66
St Croix	9,094	4,595	160	-	-	-	-	4,326	2	2	8	-
Trempealeau	8,145	6,211	170	3	-	-	-	944	74	439	244	61
Vernon	724	590	-	-	-	-	-	-	9	71	47	7
Total	65,109	38,065	728	14	-	-	-	16,987	1,154	3,310	3,600	1,252
Southeastern												
Brown	15,289	346	-	-	13	-	-	11,949	82	45	586	2,268
Calumet	63	21	-	-	-	-	-	-	4	4	30	4
Columbia	4,610	3,134	31	6	-	-	-	143	8	1,256	24	7
Dane	1,003	823	10	-	-	-	-	-	36	43	54	37
Dodge	632	547	72	-	-	-	-	-	3	3	4	4
Door	1,726	59	-	-	-	-	-	226	1,108	58	192	81
Fond Du Lac	12	12	-	-	-	-	-	-	-	-	-	-
Green	1,592	1,458	17	-	-	-	-	-	3	104	6	4
Green Lake	818	548	-	11	13	-	-	114	19	51	41	21
Jefferson	2,175	2,155	-	-	8	-	-	-	1	1	8	1
Kenosha	79	79	-	-	-	-	-	-	-	-	-	-
Kewaunee	1,593	59	-	-	13	-	-	99	119	686	537	80
Manitowoc	446	423	-	-	14	-	-	9	-	-	-	-
Milwaukee	27	27	-	-	-	-	-	-	-	-	-	-
Outagamie	1,726	541	14	-	-	6	-	778	44	42	261	41
Ozaukee	176	112	64	-	-	-	-	-	-	-	-	-
Rock	643	540	-	-	-	-	-	-	-	-	54	49
Sheboygan	60	60	-	-	-	-	-	-	-	-	-	-
Walworth	1,356	1,356	-	-	-	-	-	-	-	-	-	-
Washington	1,231	911	296	11	-	-	-	-	3	3	4	2
Waukesha	1,984	1,984	-	-	-	-	-	-	-	-	-	-
Winnebago	521	189	-	-	-	-	-	-	25	133	153	21
Total	37,763	15,386	503	29	59	6	-	13,318	1,455	2,429	1,955	2,623
State total	3,120,997	737,623	30,783	63,172	33,130	8,555	176	1,159,197	262,778	156,231	496,180	173,173
Total Lake States	8,992,131	1,201,384	257,837	351,025	101,221	19,116	8,199	4,398,771	550,510	322,846	1,258,952	522,273